FIG 1

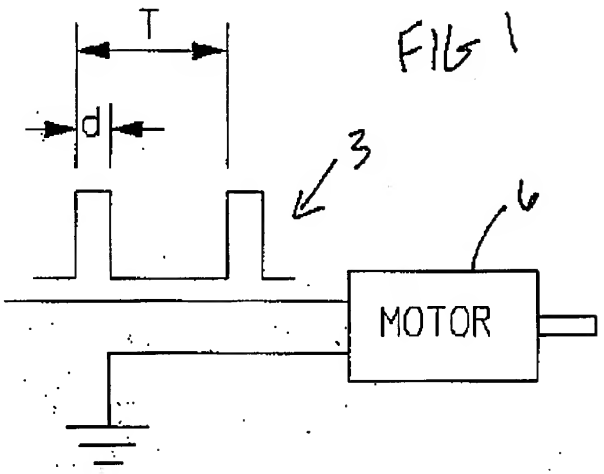


FIG 2

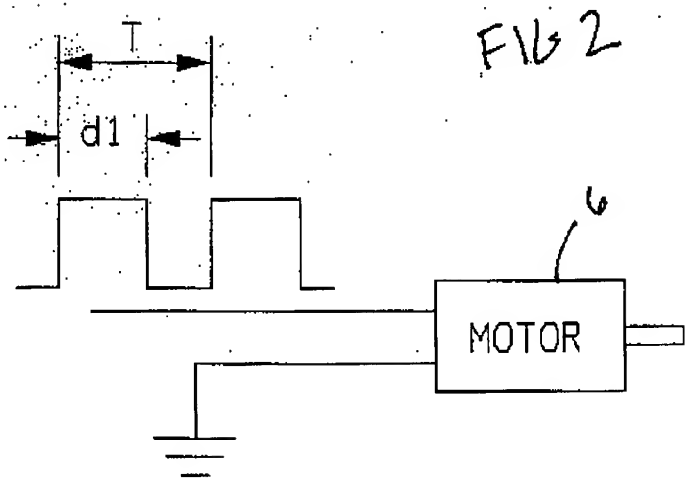


FIG 3

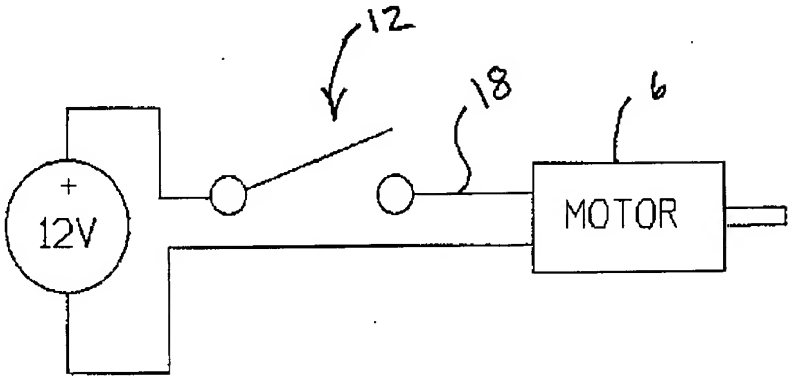
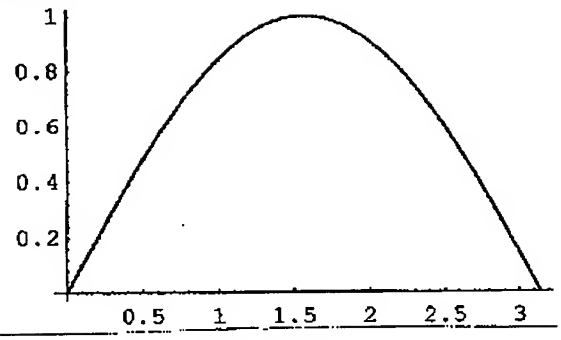
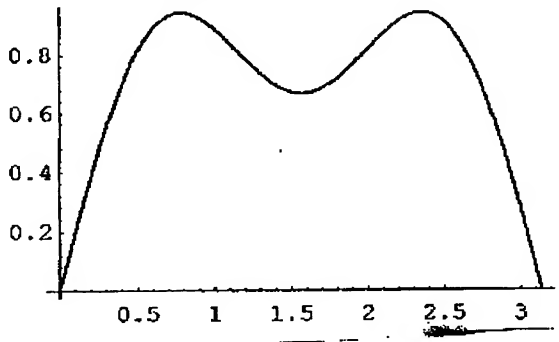


FIG 4

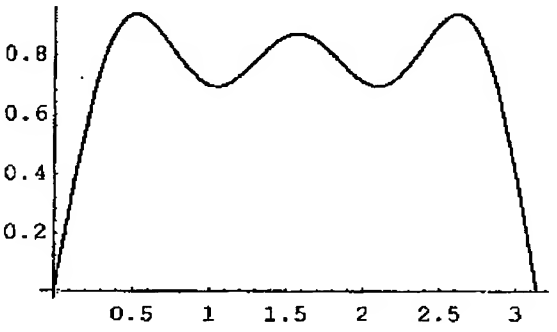
Sin[t]



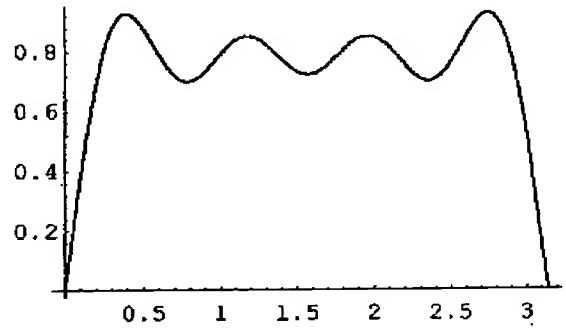
Sin[t] + (1/3)Sin[3t]



Sin[t] + (1/3)Sin[3t] + (1/5)Sin[5t]



Sin[t] + (1/3)Sin[3t] + (1/5)Sin[5t]
+ (1/7)Sin[7t]



```
Sin[t] + (1/3)Sin[3t] + (1/5)Sin[5t]
+ (1/7)Sin[7t] + (1/9)Sin[9t]
```

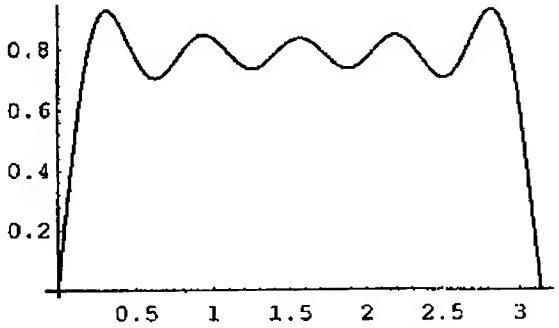
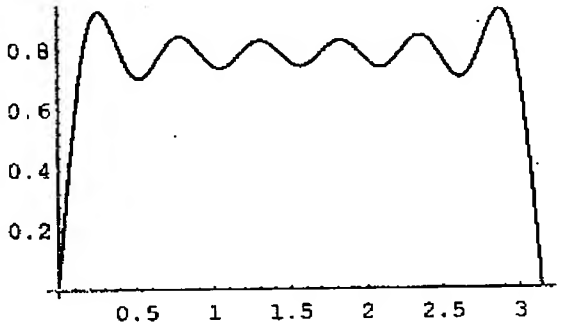


FIG 5

```
Sin[t] + (1/3)Sin[3t] + (1/5)Sin[5t]
+ (1/7)Sin[7t] + (1/9)Sin[9t] + (1/11)Sin[11t]
```




```
Sin[t] + (1/3)Sin[3t] + (1/5)Sin[5t]
+ (1/7)Sin[7t] + (1/9)Sin[9t] + (1/11)Sin[11t]
+ (1/13)Sin[13t] + (1/15)Sin[15t] + (1/17)Sin[17t]
+1/19Sin[19t] + (1/21)Sin[21t] + (1/23)Sin[23t]
```

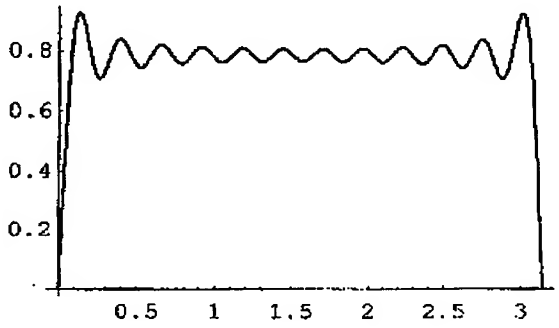


FIG 6

$$x(t)=\sum_{k=-\infty}^{\infty} c_k e^{jk\omega_0 t} \qquad \text{EQ. (1)}$$

$$\omega_0=2\pi/T_0 \qquad \text{EQ. (2)}$$

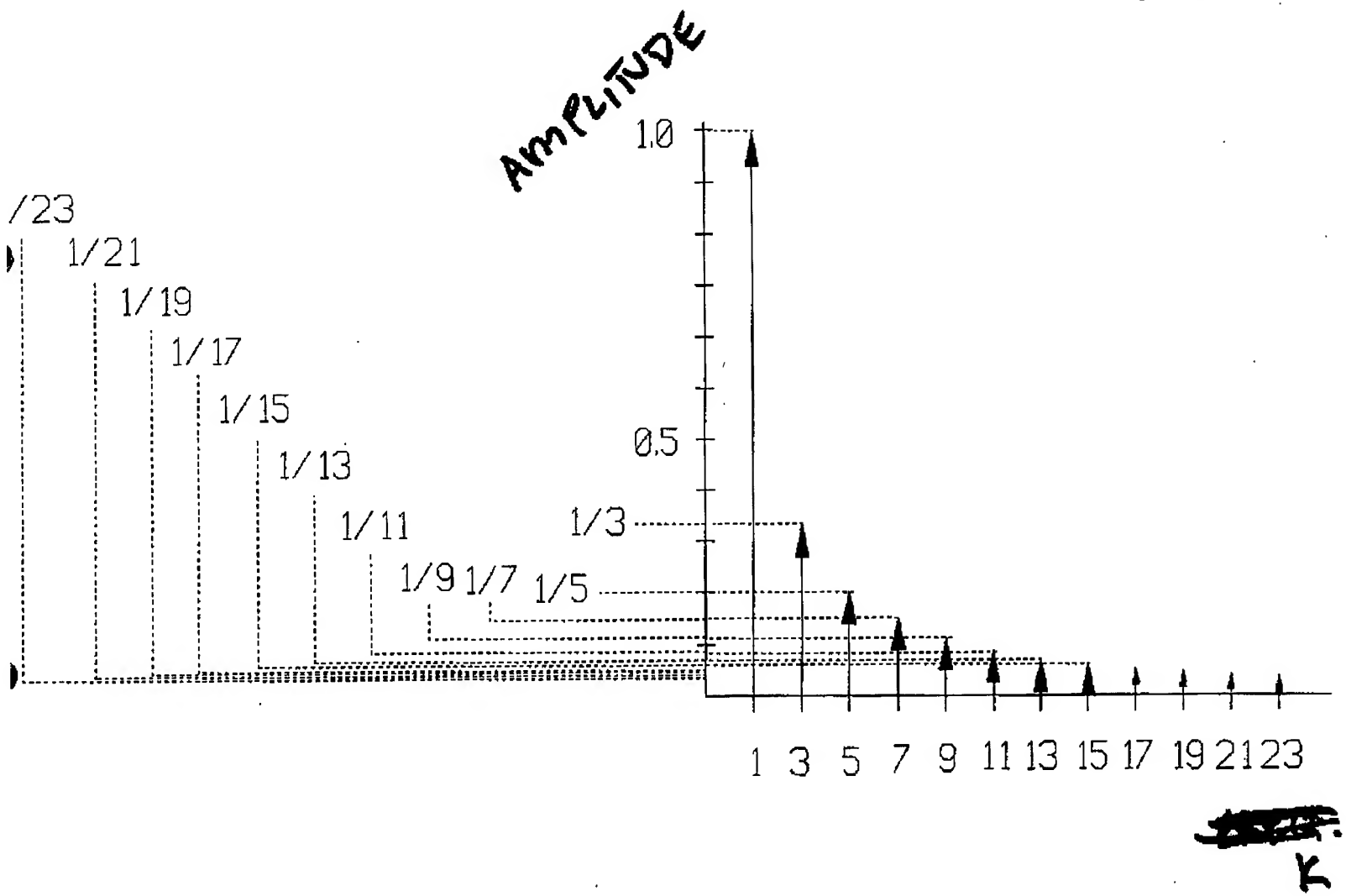
$$c_k=A\frac{d}{T_0}\frac{(\sin(k\omega_0 d/2)}{k\omega_0 d/2}e^{-jk\omega_0 d/2} \qquad \text{EQ. (3)}$$

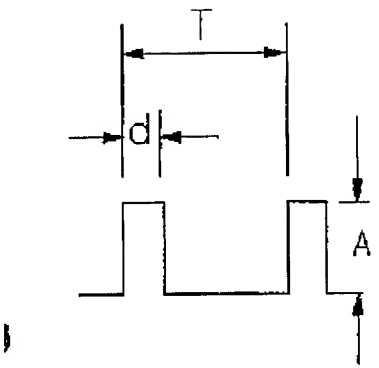
$$FACT: \exp(jt)=e^{jt}$$

$$IF\ d=T_0/4$$
$$THEN\ k\omega_0 d/2 = k\pi d/T_0 = k\pi/4$$
$$THUS\ e^{-jk\omega_0 d/2} = e^{-jk\pi/4} = -j\sin(k\pi/4) = +/-j \qquad \text{EQ. (5)}$$

$$|c_k|=\frac{A}{4}\left|\frac{\sin(k\pi/4)}{k\pi/4}\right| \qquad \text{EQ. (6)}$$

FIG 8


AMPLITUDE
1.0
0.5
1/3
1/5
1/7
1/9
1/11
1/13
1/15
1/17
1/19
1/21
/23
1 3 5 7 9 11 13 15 17 19 21 23



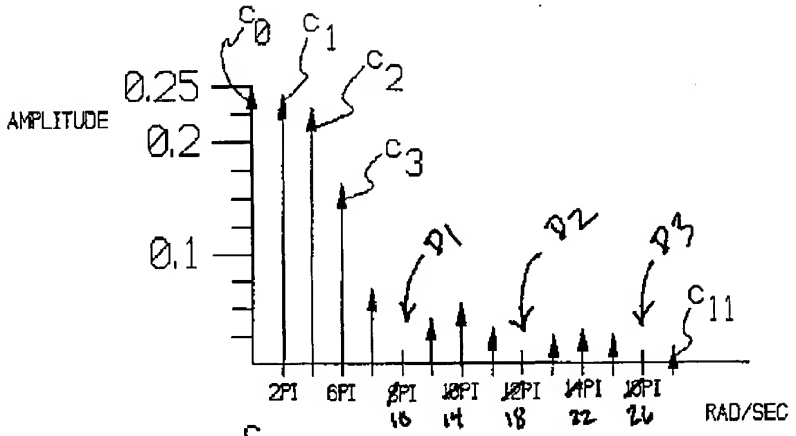
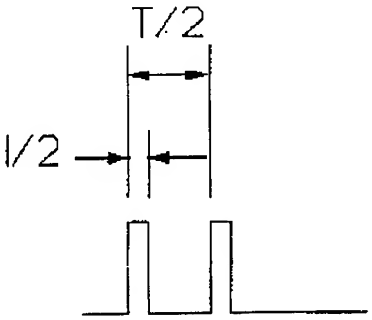


FIG 7



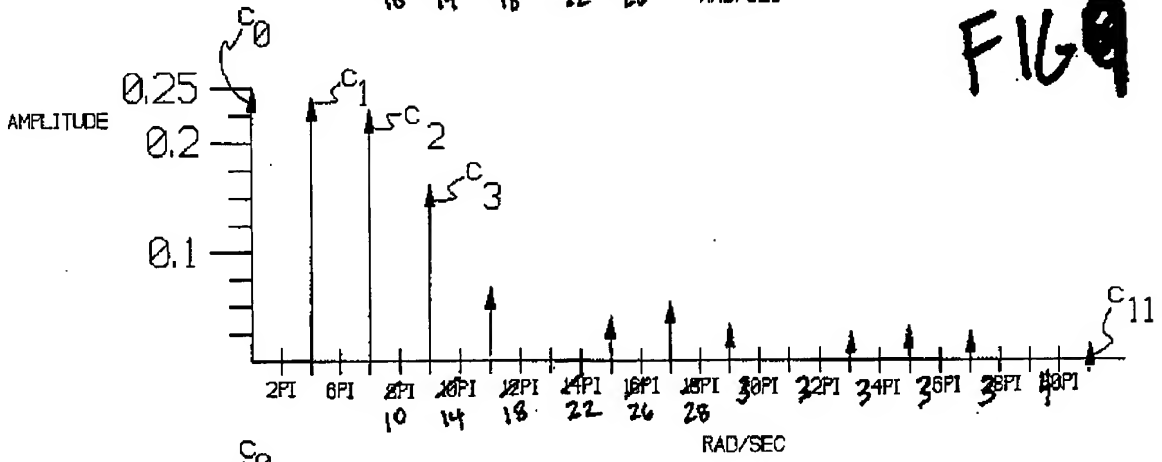
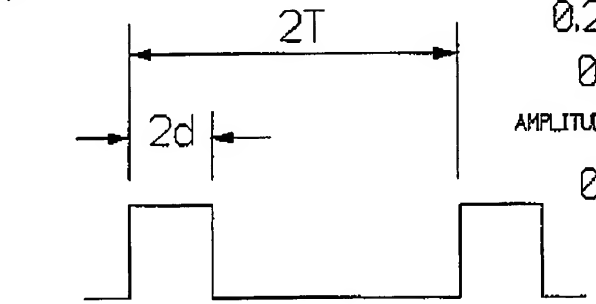


FIG 9



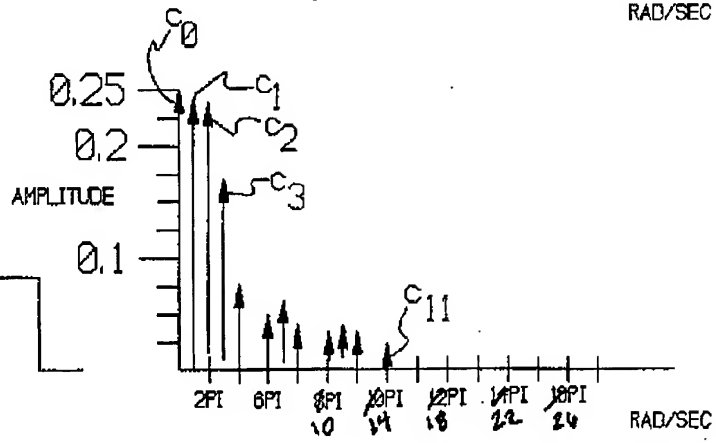


FIG 10

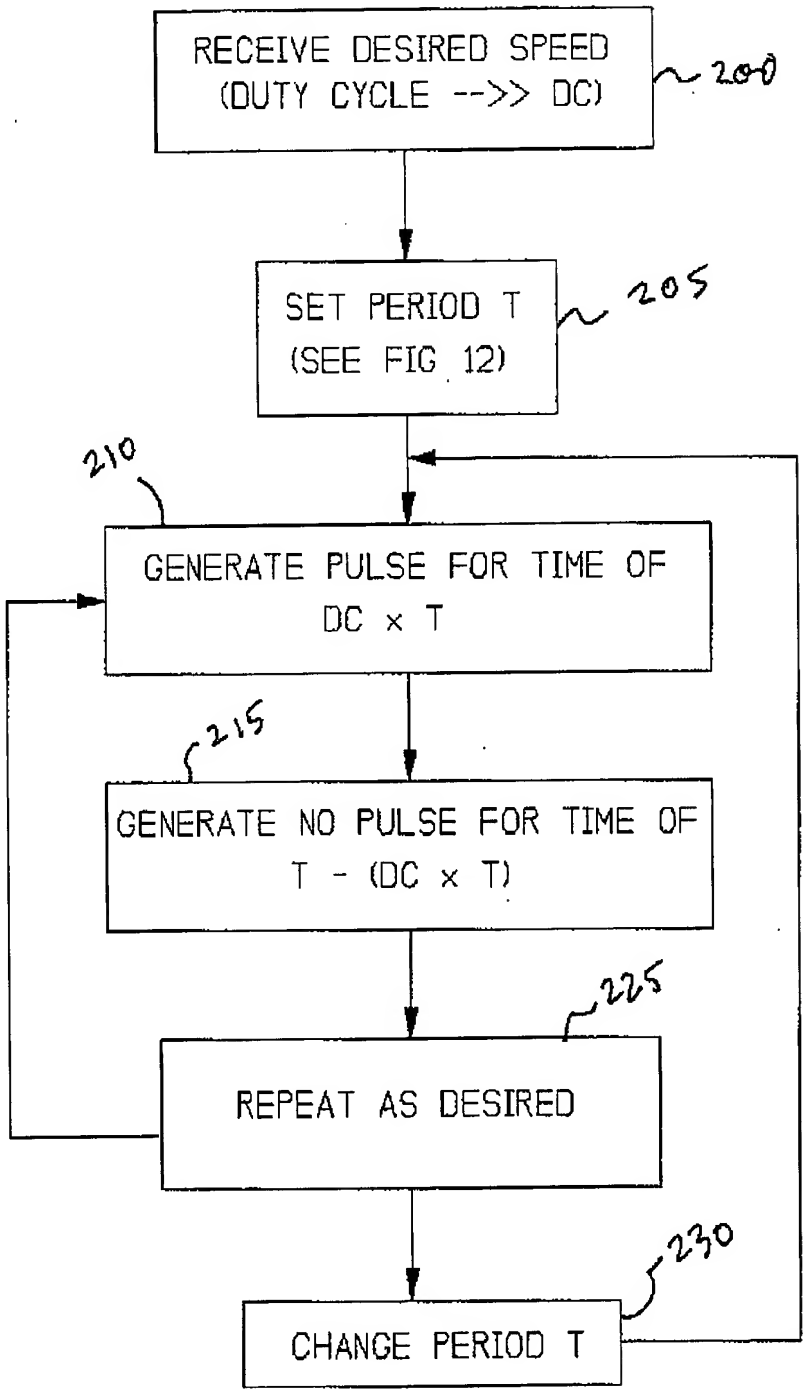

RECEIVE DESIRED SPEED
(DUTY CYCLE -->> DC)
200
SET PERIOD T
(SEE FIG 12)
205
210
GENERATE PULSE FOR TIME OF
DC x T
215
GENERATE NO PULSE FOR TIME OF
T - (DC x T)
225
REPEAT AS DESIRED
230
CHANGE PERIOD T

FIG 11

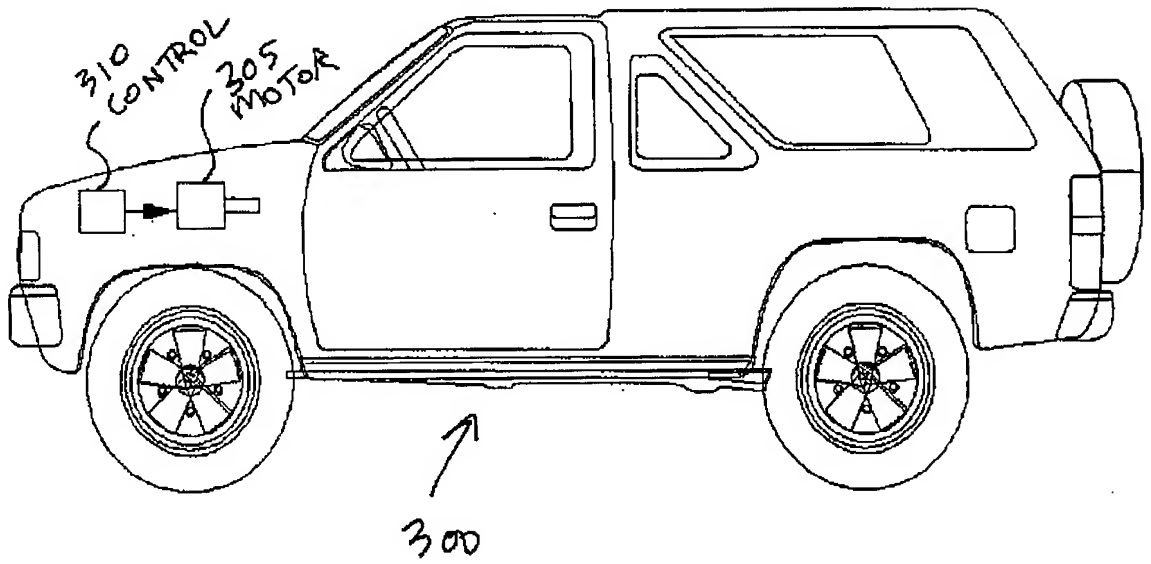


FIG 13

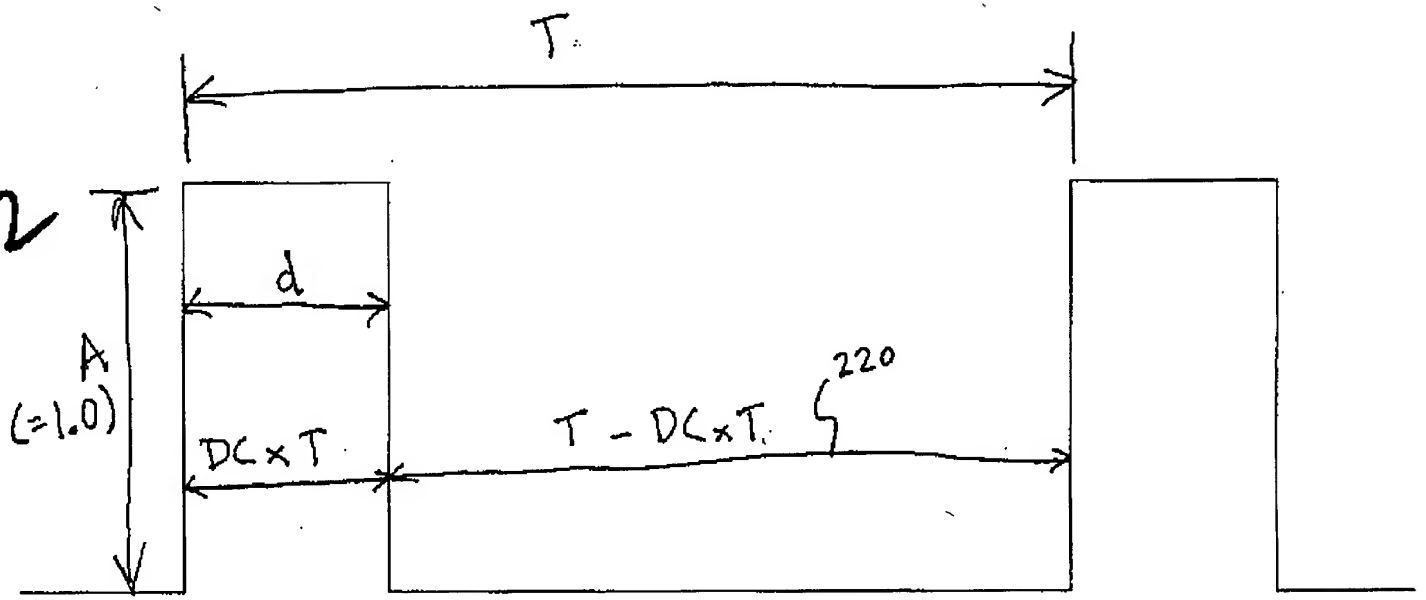


FIG 12